

FIG. 1

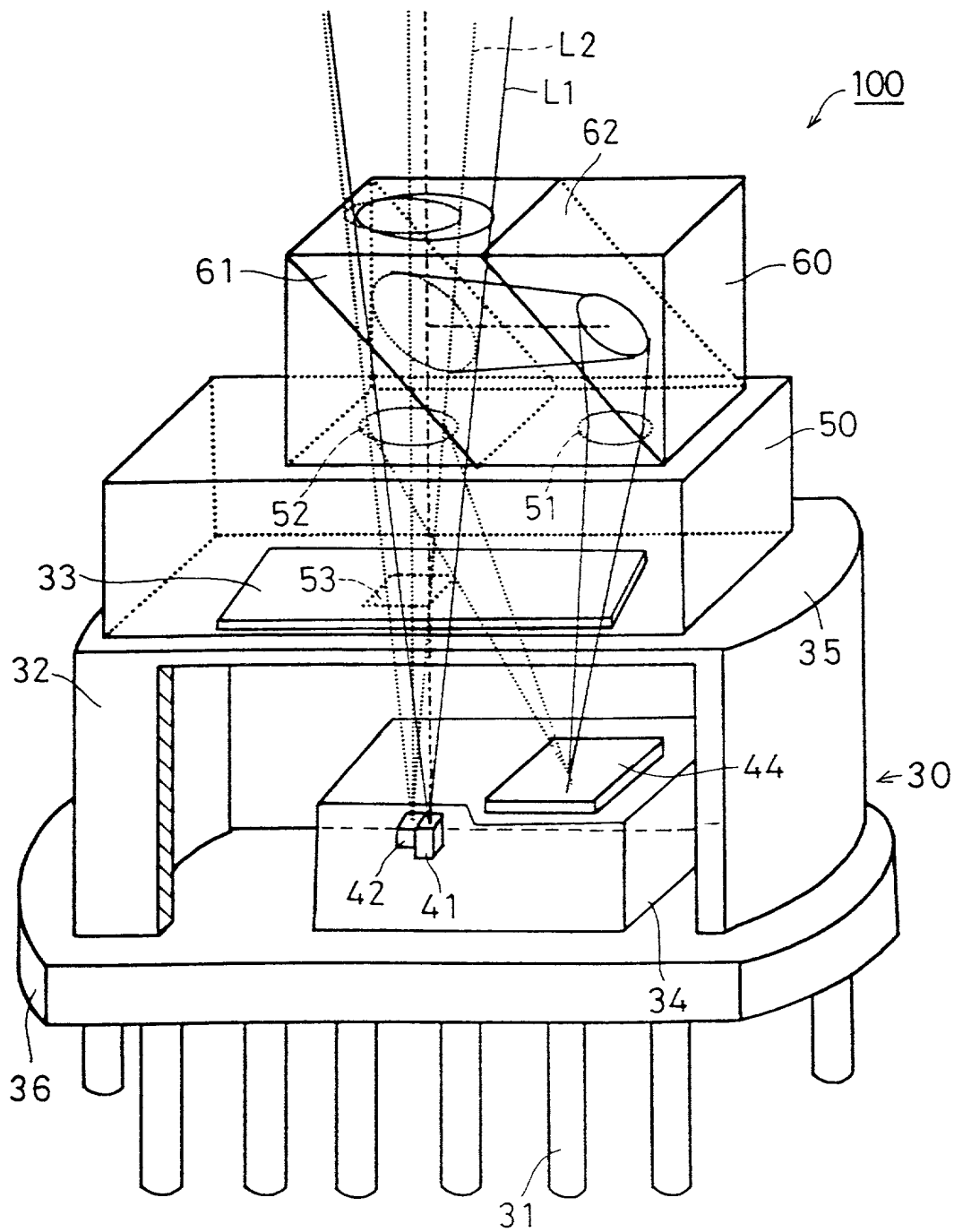


FIG. 2

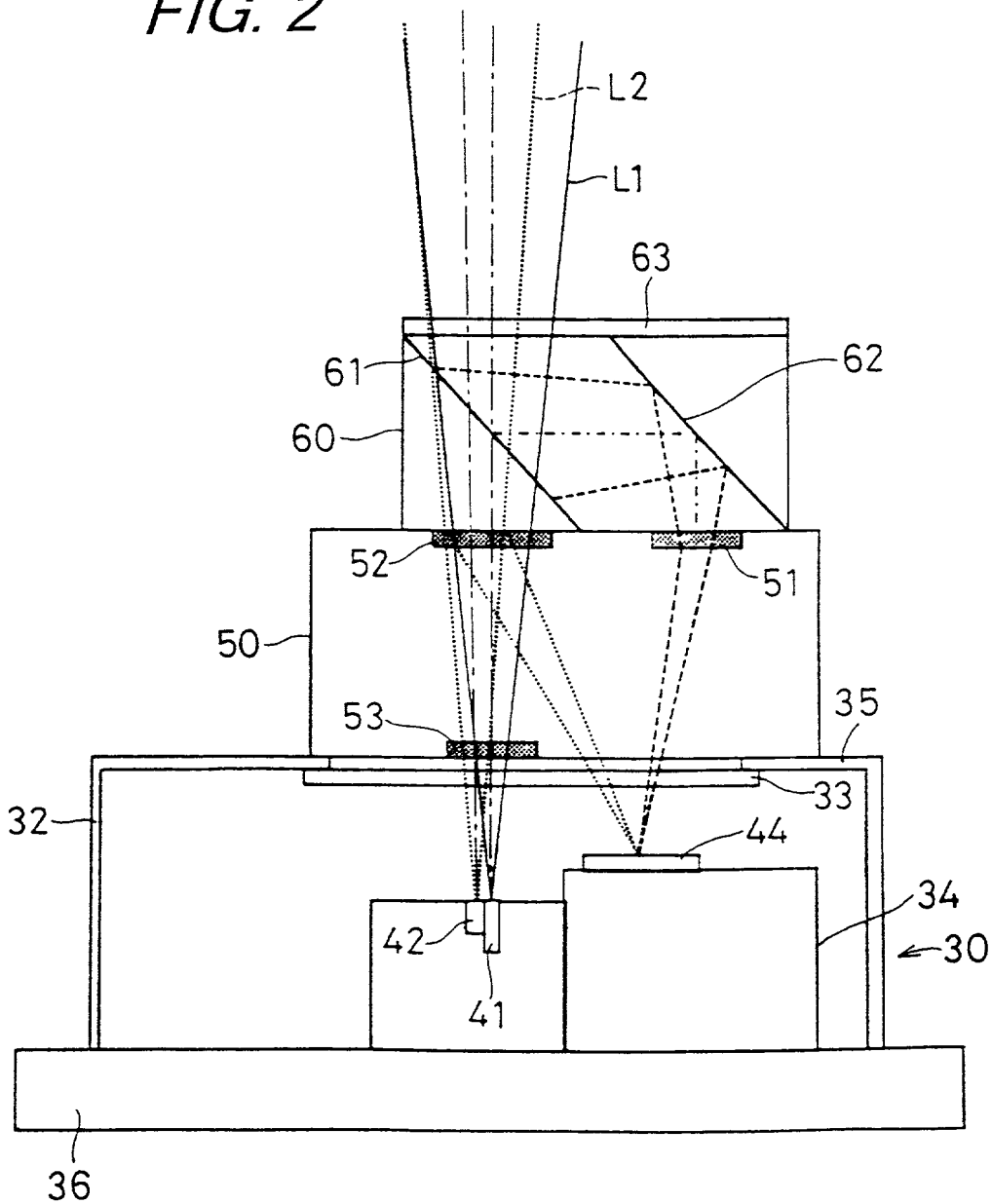
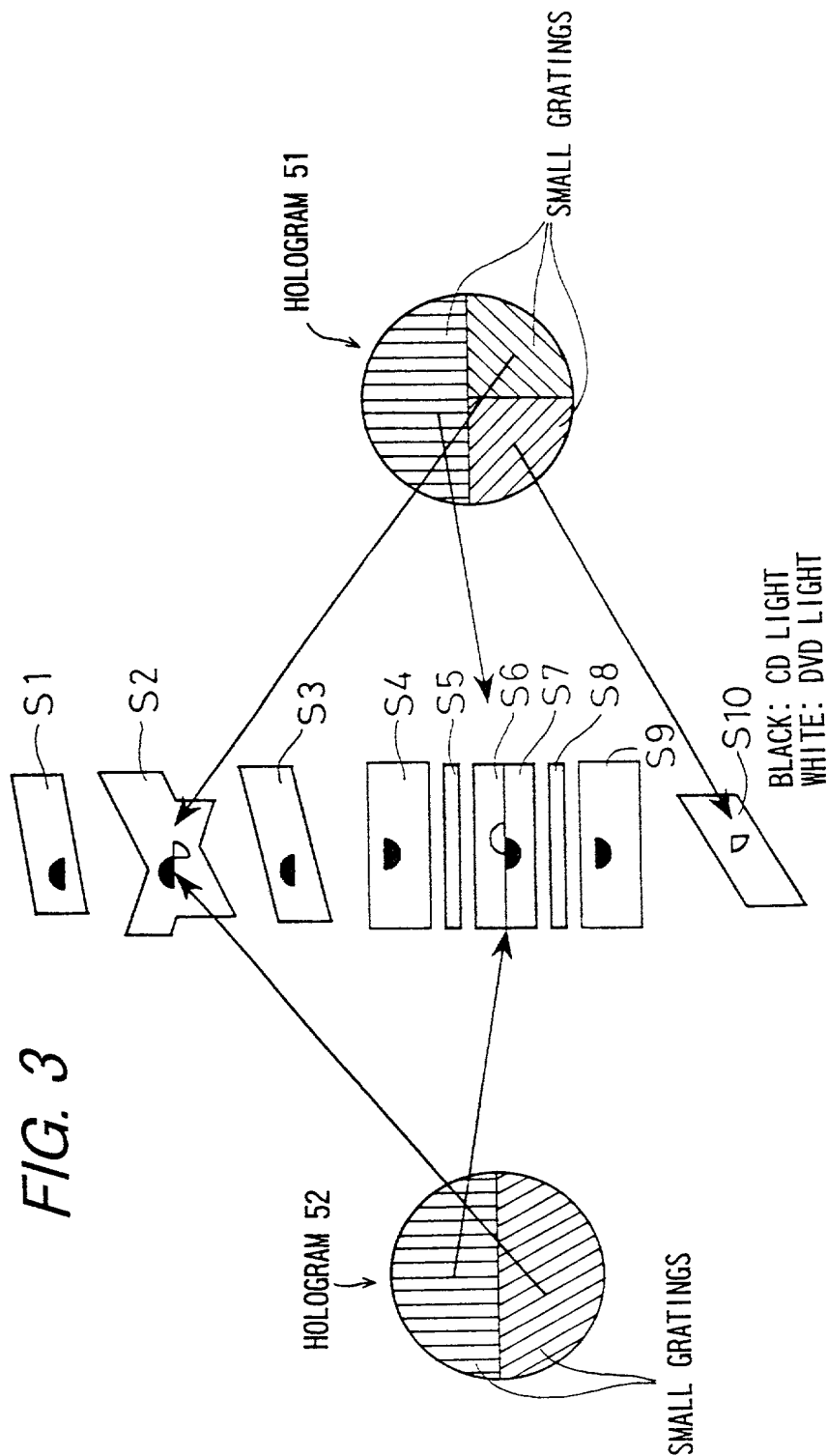


FIG. 3



CD SIGNALS		DVD SIGNALS	
FES (KNIFE EDGE)	$= (S5 + S7) - (S6 + S8)$	FES (KNIFE EDGE)	$= (S5 + S7) - (S6 + S8)$
RF	$= (S2 + S5 + S6 + S7 + S8)$	RF	$= (S2 + S5 + S6 + S7 + S8 + S10)$
TES (THREE-BEAM)	$= (S1 + S4) - (S3 + S9)$	TES (DPD)	$= (S2 - S10)$

FIG. 4

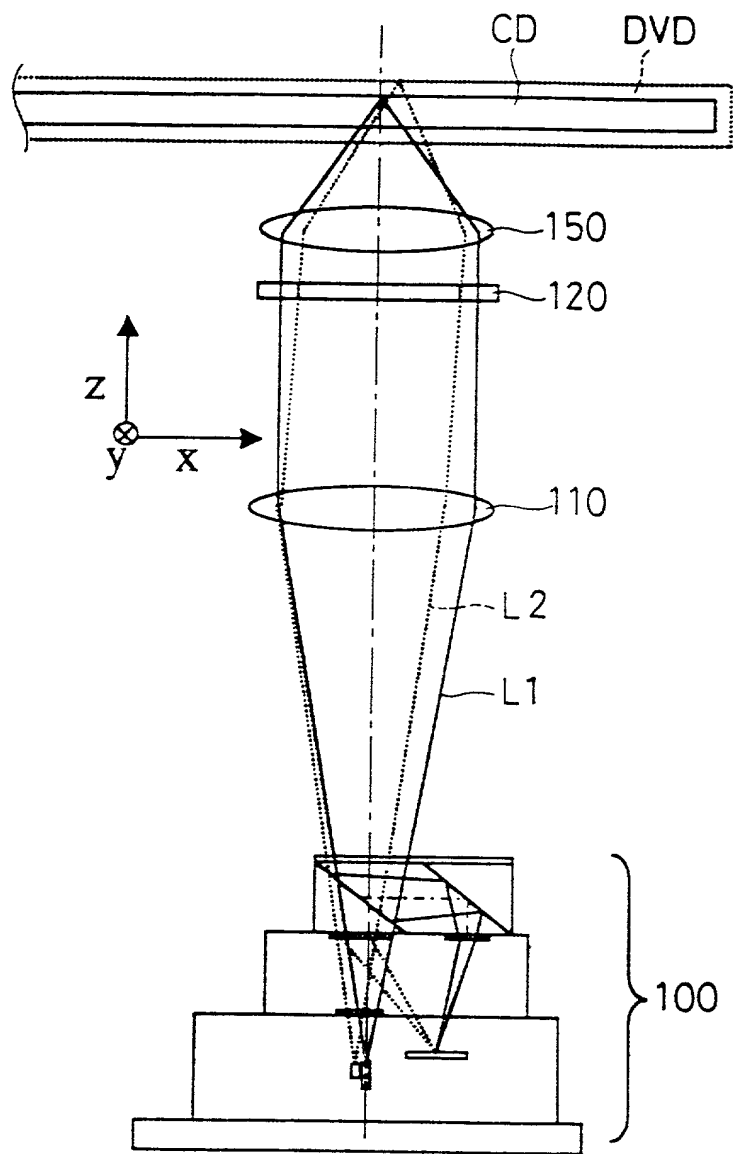


FIG. 5

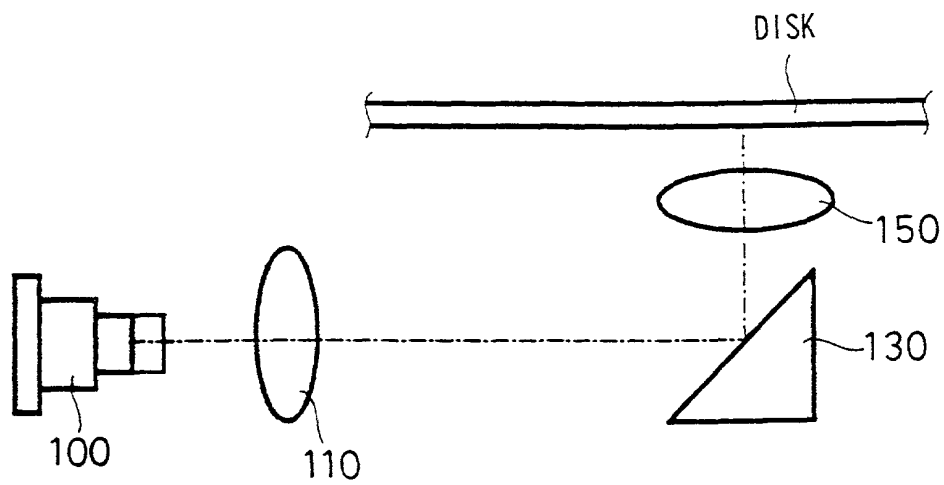


FIG. 6A

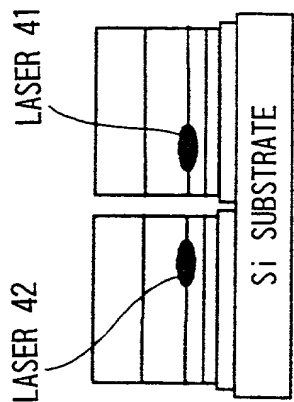


FIG. 6C

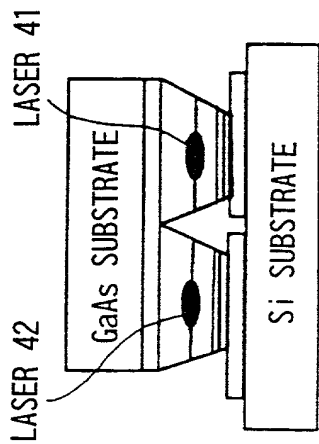


FIG. 6B

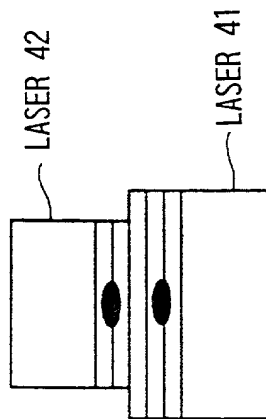


FIG. 6D

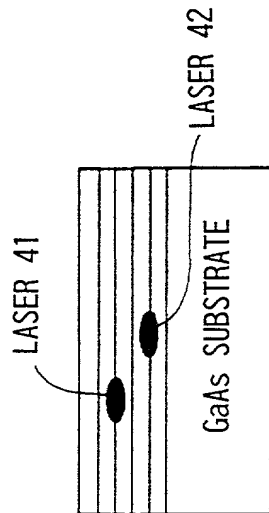


FIG. 7

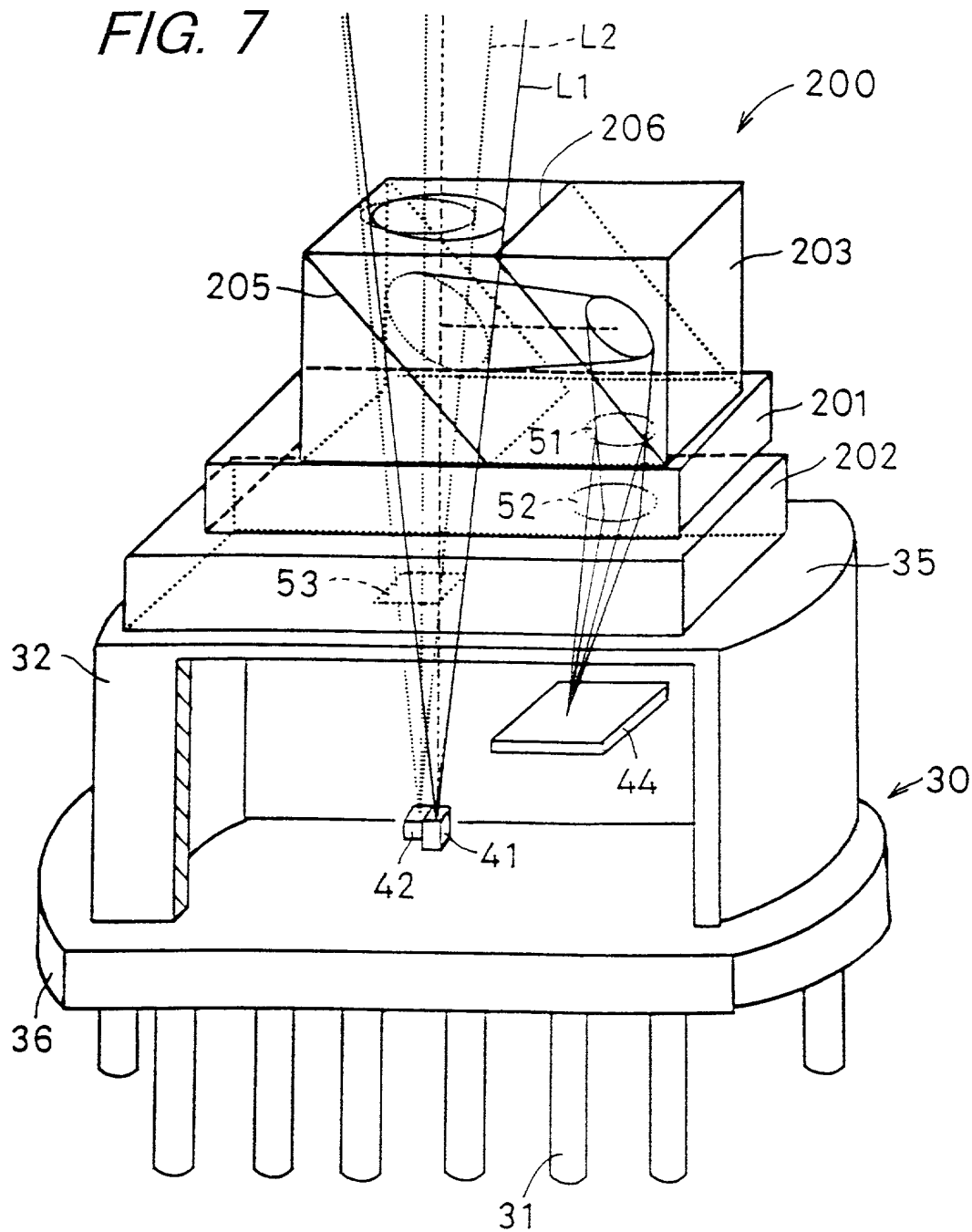


FIG. 8

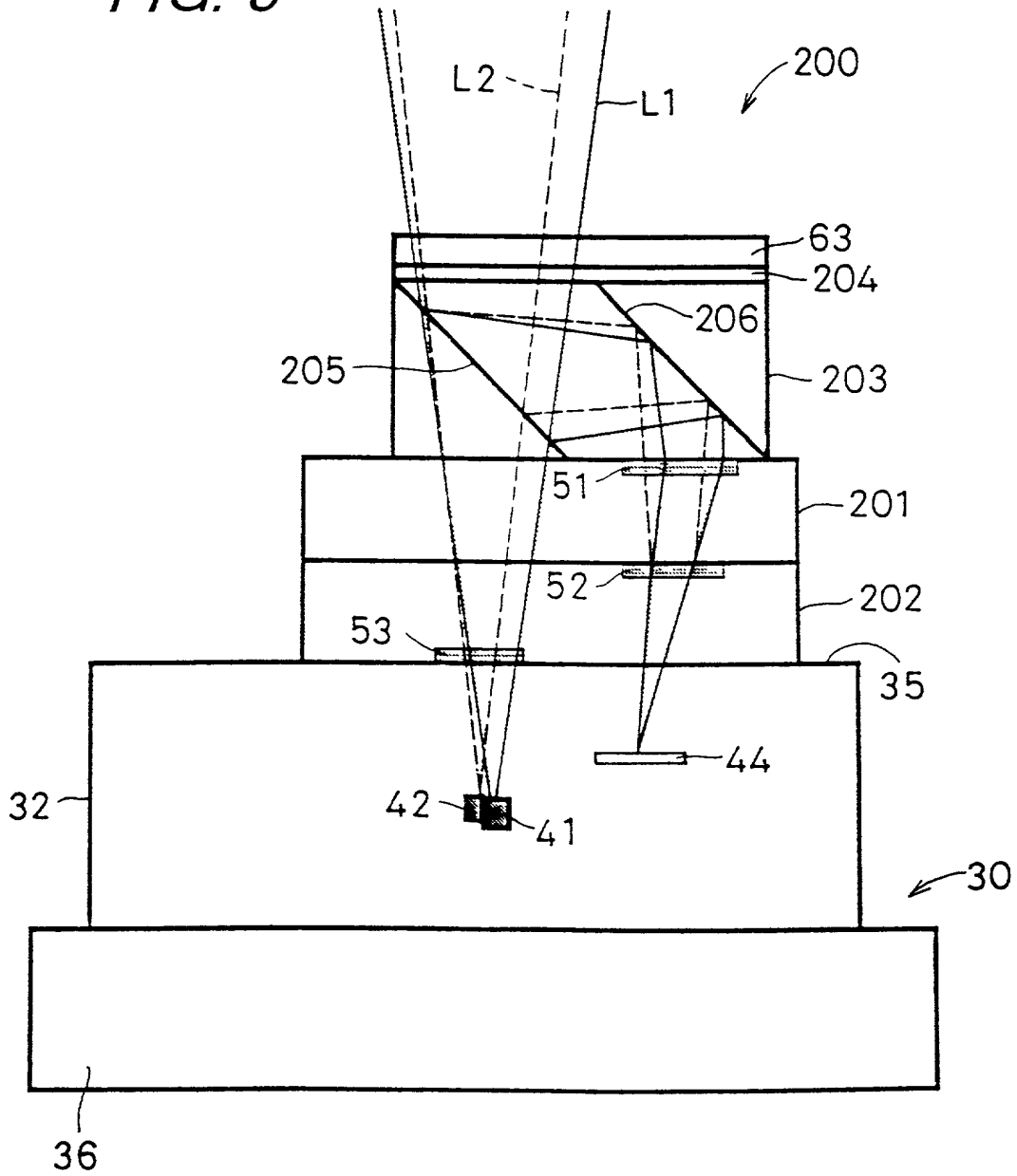
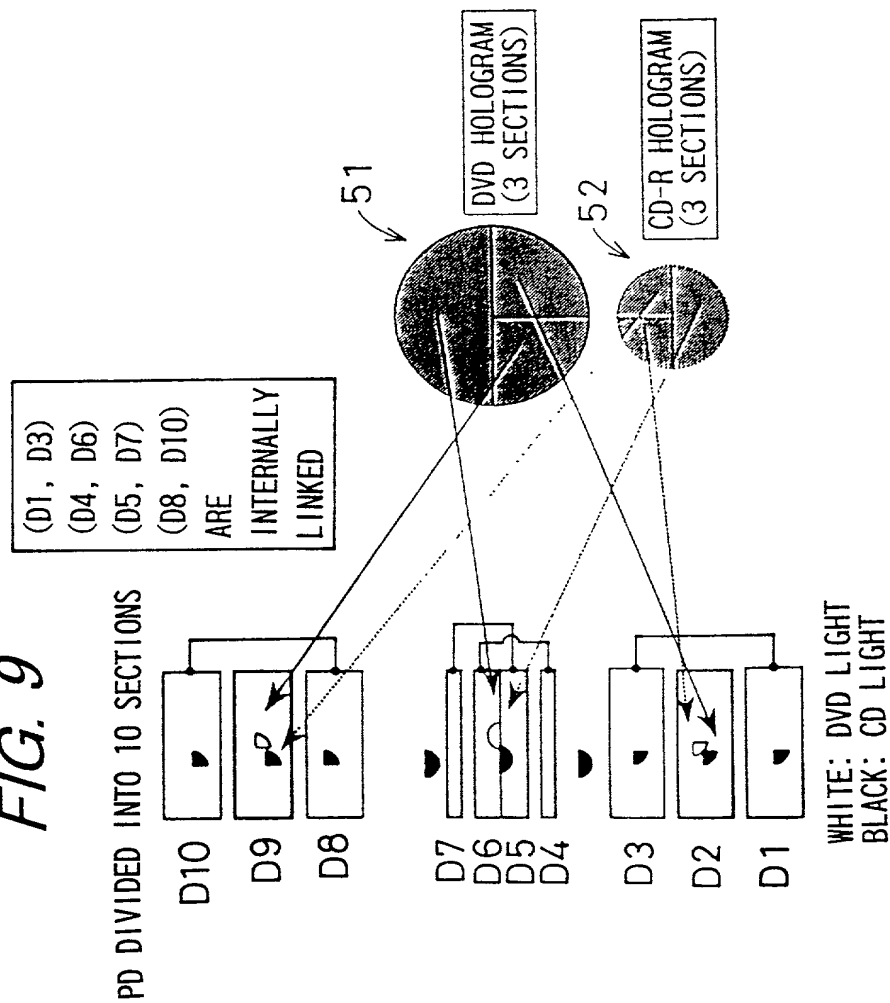




FIG. 9



CD SIGNALS (3 BEAMS)

$$\begin{aligned} \text{FES (KNIFE EDGE)} &= (D4 + D6) - (D5 + D7) \\ \text{RF} &= D2 + (D4 + D6) + (D5 + D7) + D9 \\ \text{TES (DPP)} &= (D2 - D9) - K\{(D1 + D3) - (D8 + D10)\} \end{aligned}$$

DVD SIGNALS (1 BEAM)

$$\begin{aligned} \text{FES (KNIFE EDGE)} &= (D4 + D6) - (D5 + D7) \\ \text{RF} &= D2 + (D4 + D6) + (D5 + D7) + D9 \\ \text{TES (DPD)} &= D2 - D9 \end{aligned}$$

FIG. 10

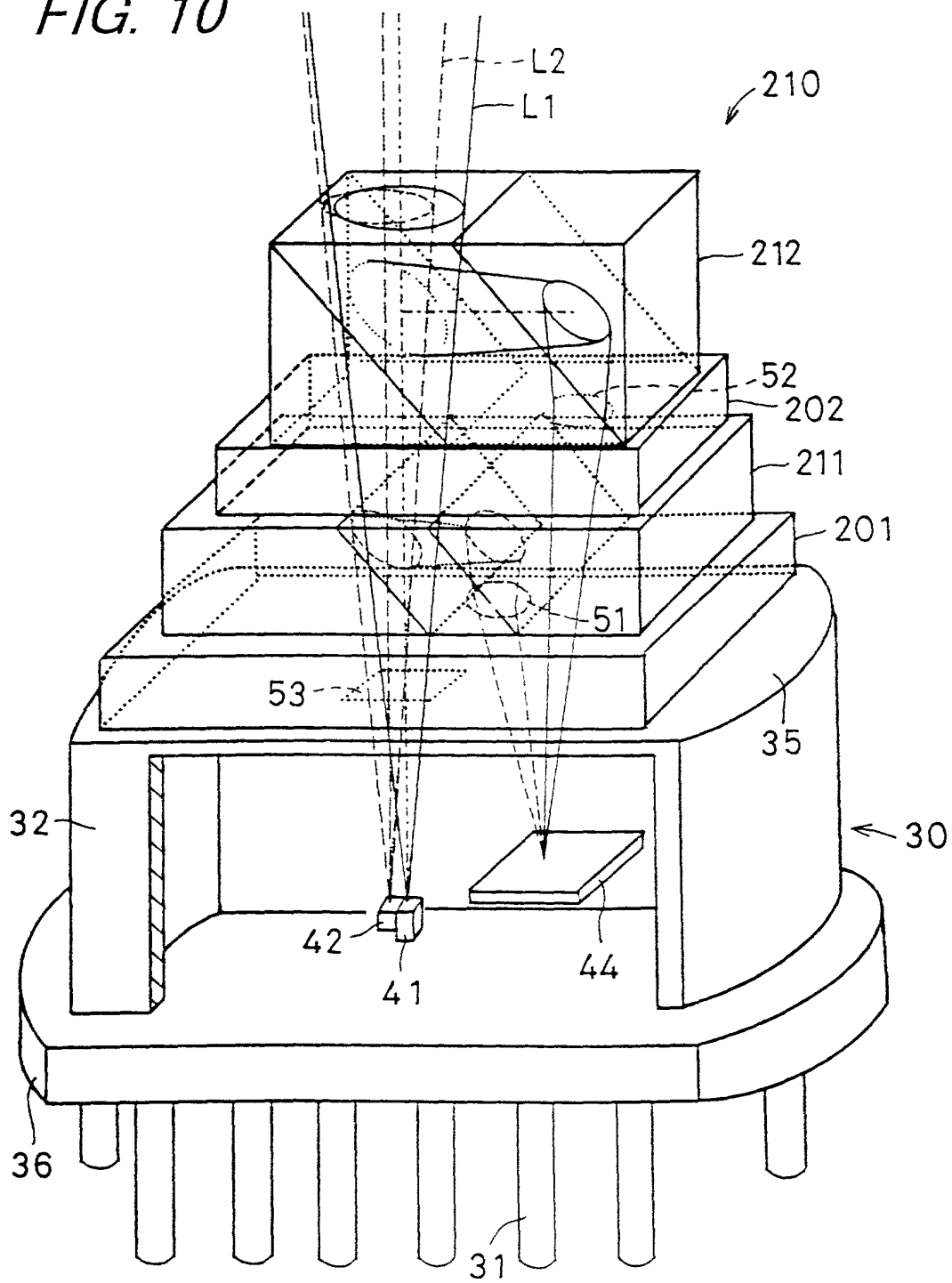


FIG. 11

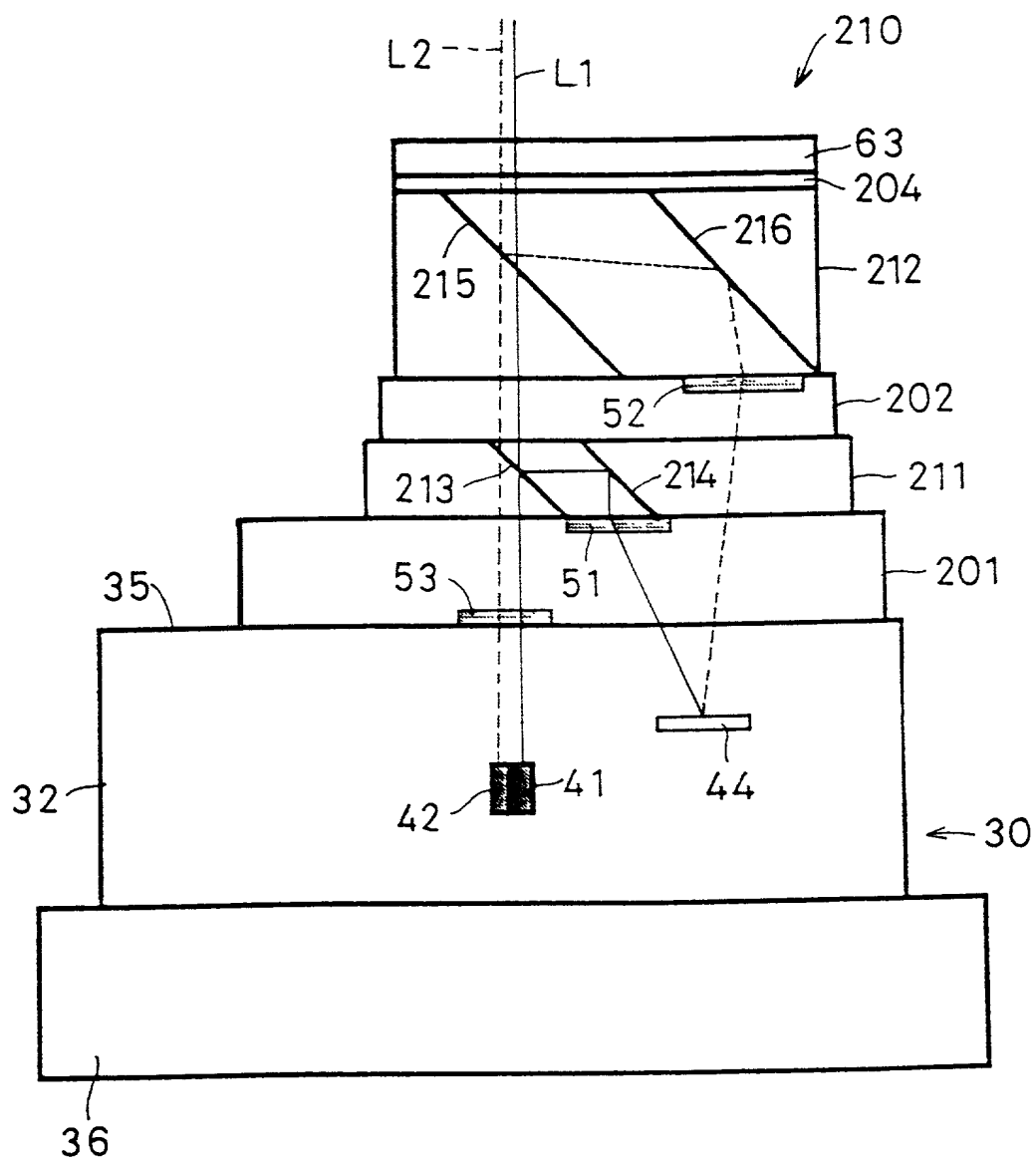
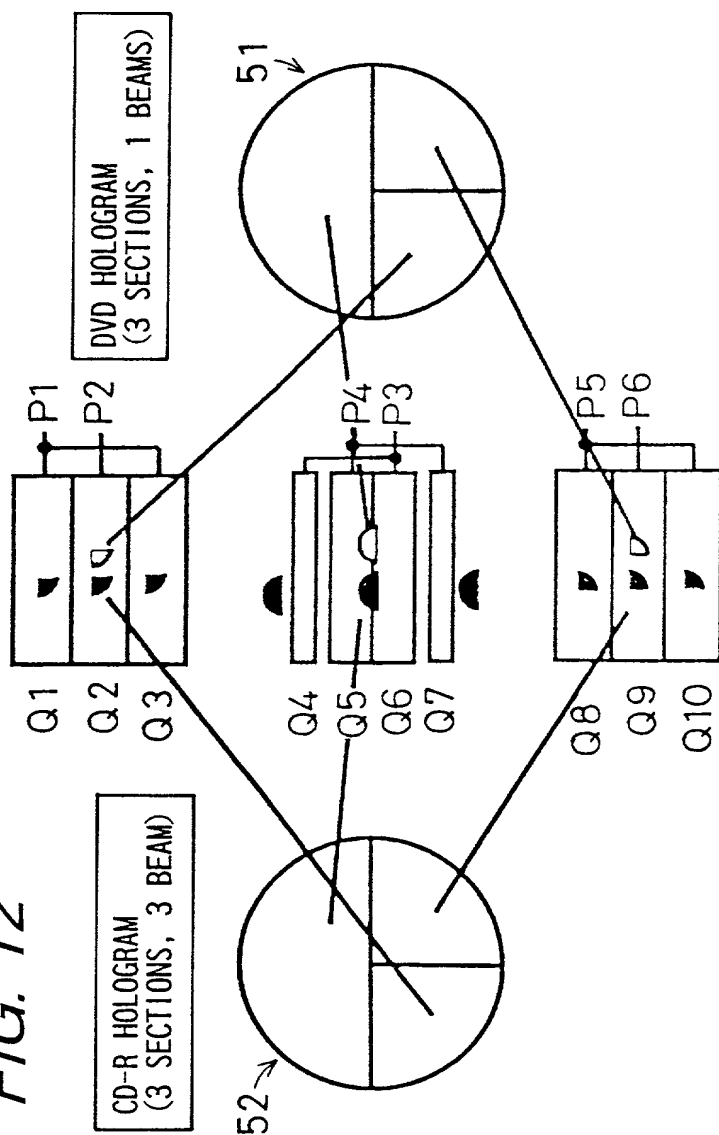


FIG. 12



$Q1 \cdot Q3 = P1, Q4 \cdot Q6 = P3, Q5 \cdot Q7 = P4, Q8 \cdot Q10 = P5$  ARE INTERNALLY LINKED

CD SIGNALS (3 BEAMS)

$$RF = Q2 + Q4 + Q6 + Q5 + Q7 + Q9$$

$$FES = (Q4 + Q6) - (Q5 + Q7)$$

$$TES(DPP) = (Q2 - Q9) - K * [(Q1 + Q3) - (Q8 + Q10)]$$

DVD SIGNALS (1 BEAM)

$$RF = Q2 + Q4 + Q6 + Q5 + Q7 + Q9$$

$$FES = (Q4 + Q6) - (Q5 + Q7)$$

$$TES(DPD) = \text{Phase}(Q2 - Q9)$$

FIG. 13 PRIOR ART

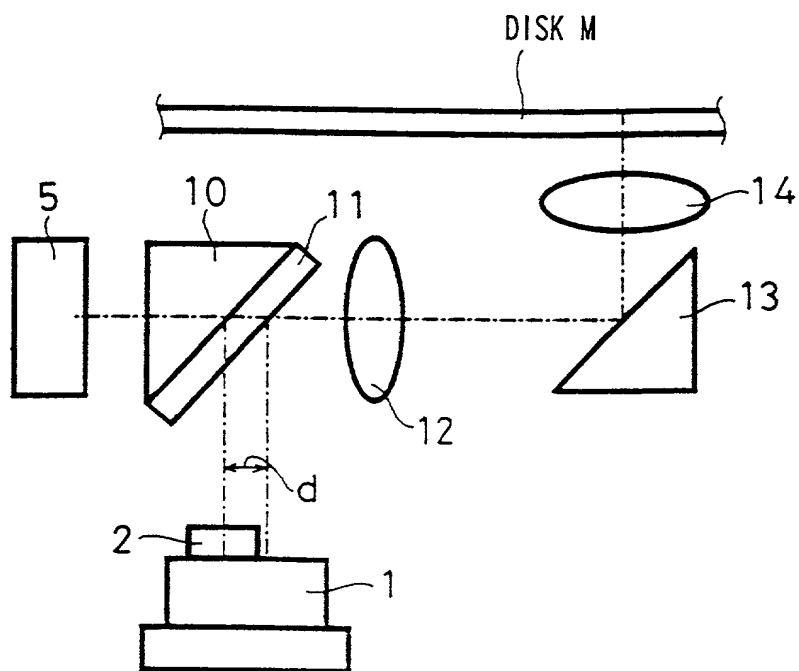


FIG. 14 PRIOR ART

